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AUTHOR Pancer, S. Mark
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ABSTRACT

There is evidence that anticipating continued performance at a task can enhance one's need for control, and will thereby influence the kinds of attributions that are made for one's performance. Causal attributions for performance in an introductory psychology course were examined with respect to students' estimates of the likelihood of their taking similar courses in future. Attributions to ability were more negatively correlated with future performance likelihood for unsuccessful (students receiving a final grade of C or less) than for successful (A or B) students. In addition, unsuccessful students tended to say that they had worked less, the more they anticipated future performance, while successful students said they had worked more, the more they anticipated future performance. Results can be interpreted in terms of the "controllability" of the two causal factors, effort and ability. (Author/BN)

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# Causal Attributions and the Likelihood of Future Performance

S. Mark Pancer
Department of Psychology
University of Saskatchewan
Saskatoon, Saskatchewan
Canada. S7N 0W0

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Sponsor: Dr. R. J. Fisher, Dept. of Psychology, University of Saskatchewan

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Causal Attributions and the Likelihood of Future Performance

A number of investigators (Pancer & Eiser, 1977; Rosenbaum, 1972; Weiner, 1974) have suggested that causal factors can be seen as lying along a dimension of "intentionality" (Rosenbaum, 1972) or "controllability" (Pancer, 1977). Causal elements lying at one end of this dimension are those which cannot be influenced or modified by the actor; causal elements lying at the other end of this dimension are those which can be influenced by the actor. Previous research (cf. Pancer, 1977) suggests that among the causal factors to which task performance is normally attributed (ie. luck, effort, task difficulty and ability), ability is one of the factors least under the control of the individual, while effort is most under the control of the individual. It may be expected that when it is important to the individual to succeed at a task, one will have a greater need for control over one's outcomes, and will hence be more likely to choose "controllable" causes (and less likely to choose "uncontrollable" causes) to explain one's performance on the task.

One factor which might be expected to influence one's need for control (and hence, one's attributions for performance) is the extent to which one anticipates performing the same or similar tasks in the future. For example, the student taking a course in his major would be more concerned about control over his performance outcomes than the student taking a course in a subject other than his major, since his performance would have implications for future performance in other courses in his major. It can be expected, then, that anticipating

continued performance at a task (or in a certain discipline) might increase a person's need to perceive control of his outcomes, resulting in greater attributions to effort (a controllable cause) and lesser attributions to ability (an uncontrollable cause).

This relationship (between anticipated future performance and attributions to effort and ability) would hold especially in those instances where the individual has done poorly on a task, since, under failure the individual would be most concerned with being able to control his outcomes and change his performance to a successful one. The relationship between attributions and future performance likelihood would be much less likely to hold for subjects who have been successful. Successful subjects do not need to control their outcomes to as great an extent, since they do not have to change their performance in future; they merely want to maintain their past performance level.

This analysis suggests the following hypotheses with regard to attributions for academic performance: 1) the correlation between future performance likelihood and attributions to effort will be more positive for unsuccessful than for successful students, and 2) the correlation between future performance likelihood and attributions to ability will be more negative for unsuccessful than for successful students.

## Method

Subjects. The subjects were students enrolled in several different sections of an introductory course in psychology at the University of Waterloo, Canada. Subjects were initially contacted in their classrooms, and a follow-up questionnaire was sent to them after they had received their final grade for the course. A total of 140 students (73 males and 67 females) completed the initial questionnaire. Of

these, 120 completed the follow-up questionnaire.

Procedure. Subjects were initially contacted in their classrooms about three weeks prior to the end of term. At this point in the term, no more than 40% of their final grade had been determined by means of projects, mid-term tests, papers, etc. All subjects received the same questionnaire, supposedly designed "to look at some additional aspects of your psychology course which will not be included in the regular course evaluation". Subjects responded to a nine-item questionnaire, in which was embedded the measure of interest, asking subjects "Approximately how many more courses in psychology do you intend to take?". Subjects responded by circling a number from 0 to 10.

Subjects were again contacted about eight weeks later, by mail, after they had received their final grades for the course. All subjects were sent a questionnaire, which they were told was "a follow-up" to the one which you completed in your psychology class at the end of the winter term". This questionnaire asked subjects what grade they had received, and then asked them how much they attributed their performance on the course to the amount of work or effort they put into the course, and ability. Subjects responded to each of these items by placing a check-mark on an 11 point scale anchored by "had very little effect on my final grade" (1) and "had a very great effect on my final grade" (11).

## Results

Of the 140 students completing the initial questionnaire, 120 completed the follow-up questionnaire. The data from ten of these subjects were excluded from the final analysis, either because they had not completed the whole questionnaire, or because they had not reported their final grade for the course.

Final Grade Variations. In general, students' final grades on their course were quite high. Of the 110 students (56 males and 54 females) satisfactorily completing both questionnaires, 42 received A's, 39 received B's, 20 received C's, 6 received D's and only 3 received F's. Due to the small number of students receiving either D or F, the data from these students were combined with that of the students receiving C for all subsequent analyses.

Students' responses to the question "How satisfied were you with your grade on this course" suggested that grade variations had produced the required variations in satisfaction (one-way analysis of variance of this measure, considering students receiving a final grade of A, B, and C or less as experimental groups, revealed an $F(2,107) = 53.25$, $p < .001$). All group means differed from one another according to a Newman-Keuls analysis, individuals receiving A being more satisfied than individuals receiving B, and those receiving B being more satisfied than those receiving C or less. The absolute mean values suggest that, in general, students receiving either an A or B on the course were relatively satisfied with their performance ($\bar{X} = 9.93$, 7.46 for A and B students, respectively, on an 11-point scale, where 11 was labelled "extremely satisfied" and 1 "extremely dissatisfied"), while students receiving C, D or F were relatively dissatisfied with their performance ($\bar{X} = 5.10$, 2.83, 3.00 for students receiving C, D and F, respectively).

Homogeneity of variances and differences in means were examined across grade levels for each measure to be correlated (ie. all attribution measures and estimated number of future courses). Means and variances did not differ across grade levels.

Attributions and Future Performance Likelihood. Correlations between estimated number of future courses and each of the attribution measures are presented in Table 1. As expected, the correlation between estimated number of future courses and attributions to effort was more positive for unsuccessful (C or less) students than for successful (A or B) students. The differences among correlations over different grade levels were not significant, however ($U_o$[1] = 2.20, df = 2, p = n.s.). However, it was found that the correlation between students' estimates of the amount of work they had done and estimated number of future courses did differ across grade levels, being more negative for unsucessful students than for successful students. Unsuccessful students saw themselves as having done less work, the more courses they anticipated taking in future. Successful students, on the other hand, perceived themselves as having done more work, the more courses they had anticipated taking in future. The differences among correlations over different grade levels were marginally significant overall ($U_o$ = 5.43, df = 2, $p < .10$). Individual comparisons between correlations at different grade levels revealed a significant difference between B and C students (Z = 2.08, $p < .05$), and a significant difference between A and C students (Z = 2.03, $p < .05$).

Table 1

Correlation of Estimated Number of Future Courses and Attribution Measures

| Measure (N) | Final Grade A (42) | B (39) | C or less (29) |
|---|---|---|---|
| Attribution to Effort | .207[a] | -.063[a] | .276[b] |
| Attribution to Ability | .199[a] | .293[a] | -.435[b] |
| Estimated Amount of Work Put into Course | .231[a] | .251[a] | -.273[b] |

Note. Correlations bearing different superscripts are significantly different from one another ($p < .05$). Comparisons were made only among correlations relating to the same dependent measures.

As predicted, the correlation between estimated number of future courses and ability attributions was more negative for unsuccessful students than for successful students. The differences among correlations over different grade levels were significant overall ($U_o = 10.09$, $df = 2$, $p < .01$), as were the differences between A and C students ($Z = 2.64$, $p < .01$) and B and C students ($Z = 2.95$, $p < .01$). Unsuccessful students were less likely to attribute their failure to lack of ability the more psychology courses they anticipated taking in future, while successful students were more likely to attribute their performance to ability the more psychology courses they anticipated taking.

## Discussion

The results of this experiment provide evidence that anticipating continued performance at a task can enhance one's need for control, and will thereby influence the kinds of attributions that are made for one's performance. Unsuccessful students tended to say that they had worked less, the more they anticipated future performance at the task, implying that they had attributed their failure, at least in part, to a lack of effort (a controllable cause). Also, as predicted, unsuccessful students tended to attribute their failures less to a lack of ability (an uncontrollable cause), the more courses they anticipated taking in future. Successful students showed the opposite tendency, attributing their performance less to effort, and more to ability, the more courses they anticipated taking in future.

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## Footnote

1. The $U_o$ statistic is reported in Marascuilo (1971), for use in comparing overall differences in several correlations. It is distributed approximately as a Chi-square.